

S/109/60/005/012/035/035  
E192/E382

Interdepartmental Seminar on Cathode Electronics  
(16th Session)

in the space-charge regime. On the basis of his experimental data the author showed that the main factor leading to an increase in the perveance of a diode with a pressed cathode is the increase in the intensity of the activated barium stream.

The third paper was read by P.V. Timofeyev and R.M. Aranovich. They reported the results of their investigation of a cold cathode made of magnesium oxide. They constructed electron tubes with magnesium-oxide cathodes (on a nickel base) coated with a layer of porous magnesium oxide having a thickness of 50  $\mu$ . These tubes could operate in various amplifying devices and could give an anode current up to 10 mA. The useful life of these tubes is more than 10 000 hours. The authors also demonstrated such a tube in a low-frequency amplifier.

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In the paper "Secondary-emission Characteristics of Antimony Sulphide and its Analogues" by V.L. Makedonskiy, it was shown that the secondary emission coefficient of the layers of  $Sb_2S_3$ ,

$Sb_2Se_3$  and  $Sb_2Te_3$  does not exceed 1.3.

A paper by V.A. Grodko et al entitled "Influence of the Difference of the Work Functions of the Electrodes of a Thermionic Converter on Its Output Parameters" presented the results of a theoretical analysis of the dependence of the output power and efficiency of a converter on the difference between the work functions of the anode and cathode (the above paper is published in the present issue of the journal). ✓

Card 3/3

"APPROVED FOR RELEASE: 09/01/2001

CIA-RDP86-00513R001859720013-5

VIKHLYAYEVA, R.P.; KUL'VARSKAYA, B.S.; SHABEL'NIKOVA, A.E.; YASNOPOLO'SKAYA,  
A.A.

Interinstitutional seminar on cathode processes; 16th  
session. Radiotekh. i elektron, 5 no.12:2074-2075 D'60.  
(MIRA 13:11)

(Cathodes)

APPROVED FOR RELEASE: 09/01/2001

CIA-RDP86-00513R001859720013-5"

S/109/60/005/05/020/021  
E140/E435

AUTHORS: Basalayeva, N.Ya., Vikhlyayeva, R.P., Zhdan, A.G.,  
Zernov, D.V., Kofanova, I.I., Pervova, L.Ya.,  
Politova, N.M., Polyakova, M.A., Popov, B.N., Spivak, G.V.,  
Shabel'nikova, A.E. and Yasnopol'skaya, A.A.

TITLE: Report on the Ninth All-Union Conference on Cathode  
Electronics

PERIODICAL: Radiotekhnika i elektronika, 1960, Vol 5, Nr 5,  
pp 866-879 (USSR)

ABSTRACT: This conference took place in Moscow from 21-28th  
October 1959 with the participation of Soviet scientists  
and guests from Hungary, Eastern Germany, the Chinese  
Peoples' Republic and Czechoslovakia. The chairman of  
the organization committee was Academician Vekshinskiy.  
The report consists of brief abstracts of 125 papers  
presented at the plenary sessions and the sections of  
the conference. 15 Reports were presented in the section  
on surface properties of solids dealing with electron  
adsorption and structural properties of active surface  
films. Electron-optical studies of "patch fields" on  
emitting surfaces were discussed. 6 Papers on the

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E140/E435

Report on the Ninth All-Union Conference on Cathode Electronics

physics of semiconductor cathodes were given in the section on thermionic emission. 17 Papers were presented in the section on photoelectric emission. Many papers discussed industrial technology of photocells and multipliers. 16 Papers were presented at the section on secondary-electron emission. The section on field emission heard 11 papers discussing pulse field emission at high current densities, surface phenomena, field emission of semiconductors and the "condenser" cathode. More than 30 papers and brief communications were presented at the section on properties, new types and technology of cathodes, relating to the technology of various types of cathodes, their behaviour in practical devices and the operating mechanisms of individual cathodes. 19 Papers were given at the section on interaction of solid bodies with streams of charged particles and residual gases. Notes of conference discussion indicated that several sharp and critical exchanges of views took place.

Card 2/2

SOV/109-4-7-24/25

AUTHORS: Alekseyeva, A.P., Vikhlyayeva, R.P., Shabel'nikova, A.E.  
and Yasnopol'skaya, A.A.

TITLE: Interdepartmental Seminar on Cathode Electronics  
(14th Meeting) (News Item)

PERIODICAL: Radiotekhnika i elektronika, 1959, Vol 4, Nr 7,  
pp 1215 - 1216 (USSR)

ABSTRACT: The meeting of the seminar took place on March 2, 1959,  
at the Institut radiotekhniki i elektroniki AN SSSR  
(Institute of Radio-engineering and Electronics of the  
Ac.Sc., USSR). During the meeting, 8 articles were read  
and discussed. The first article, by A.R. Shul'man  
and Yu.A. Morozov, was devoted to the investigation of  
the elastic reflection of the electrons having energies  
ranging from 100 - 2 000 eV from 10 different elements  
(Cr, Ni, Cu, Ge, Mo, Mg, Ta, Pt, Au, C).  
Ye.S. Mashkova and G.A. Chetverikova read a paper on  
"Investigation of the Temperature Dependence of the  
Secondary Emission Coefficient of Monocrystals of Barium  
Titanate and Lead Titanate".

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SOV/109-4-7-24/25

Interdepartmental Seminar on Cathode Electronics (14th Meeting)  
(News Item)

M.V. Sinel'nikov reported on his investigation of the electron emission of a pure metal surface at room temperatures.

A paper entitled "Electro-microscopic Investigation of the Emission of Pressed Cathodes" was read by Ye.M. Dubinina.

A.A. Gugnin and B.N. Popov reported on "Influence of Oxygen on the Emission of the Cathodes Prepared From the Salts of Barium and Calcium Having High Melting Points".

B.Ch. Dyubua and B.N. Popov dealt with "Some Properties of the Barium-titanium System".

The results of an investigation of the field emission from tungsten monocrystals by pulse technique were presented by I.I. Gofman and G.N. Shuppe.

Card 2/3

Interdepartmental Seminar on Cathode Electronics (14th Meeting)  
(News Item) SOV/109-4-7-24/25

V.M. Gavrilyuk and Yu.S. Vedula presented a paper  
dealing with "Adsorption of Barium and Barium Oxide on  
Tungsten Surfaces".

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SOV-109-3-6-26/27

AUTHORS: Savitskaya, Ya. S., Vikhlyayeva, R. P., Alpatova, N. M.

TITLE: An Interdepartmental Seminar on Cathode Electronics (7th Session) (Mezhdvudomstvennyy seminar po katodnoy elektronike (7-e zasedaniye))

PERIODICAL: Radiotekhnika i Elektronika, 1958, Vol 3, Nr 6,  
p 854 (USSR)

ABSTRACT: On the 3rd February 1956 a Session of the Interdepartmental Seminar took place in the Institute of Radio Engineering and Electronics of the Soviet Academy of Sciences. During the meeting 6 lectures were delivered. A. A. Maklakov and Ye. P. Ostapchenko dealt with the new method of preparing barium and barium-calcium aluminates and tungstates. L. Ya. Smoktiy presented the results of her work on the improvement of the processing of sintered cathodes. The lecture of R. M. Rybakova dealt with the investigation of oxide suspensions for directly heated cathodes. A. P. Iyevlev spoke of the production technology and the methods of control of a new barium getter. N. I. Ekivina considered the problem of application of the electro-osmosis for the investigation of the electro-phoresis of alundum suspensions. The paper of

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SOV-109-3-6-26/27

An Interdepartmental Seminar on Cathode Electronics (7th Session)

Yu. N. Buznikov analysed the causes and the mechanism of  
the darkening of alundum coatings during the preparation  
and the operation of the electron tubes.

SUBMITTED: March 14, 1958

Card 2/2 1. Electron tubes - USSR

8/109/60/005/010/028/031  
E033/E415

AUTHORS: Vikhlyayeva, R.P., Zhdan, A.G. and Shabel'nikova, A.E.

TITLE: Inter-Institutional Seminar on Cathode Electronics  
(15th Meeting)

PERIODICAL: Radiotekhnika i elektronika, 1960, Vol.5, No.10,  
pp.1747-1748

TEXT: Six reports were heard at the 15th Meeting of the Inter-Institutional Seminar on Cathode Electronics held on April 4, 1960 at the Institut radiotekhniki i elektroniki AN SSSR (Institute of Radioengineering and Electronics AS USSR). In his "The Application of Thermo-Electronic Emission for Direct Conversion of Heat Energy into Electrical", N.D.Morgulis gave a review of the work carried out at the Institut fiziki UkrSSR (Institute of Physics AS UkrSSR) and also at the Kiyevskiy gosudarstvennyy universitet (Kiyev State University). Some general physical properties of such converters, using pure tungsten, barium and cesium on tungsten, and thorium bicarbide cathodes had been investigated. For ThC<sub>2</sub> cathodes at 1900 to 2100°K, the efficiency was 8 to 15% and the e.m.f. 1.7 V. L.N.Dobretsov and N.D.Devyatkov took part in the discussion. V.B.Sandomirskiy reported on his and Sh.M.Kogan's work on the

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Inter-Institutional Seminar ...

S/109/60/005/010/028/031

E033/E415

external emission of "hot" electrons from homeopolar semiconductors with a strong applied homogeneous electric field. The emission current is very dependent on the field particularly in the region corresponding to the horizontal part of the semiconductor volt-amp characteristic. M.I.Yelinson and A.G.Zhdan gave a report on the emission of "hot" electrons from quartz, activated by carbon. The authors had observed the emission of "hot" electrons from thin layers (approximately 5 microns) of  $\text{SiO}_2 + \text{C}$ , depending on the voltage at the layer, the anode voltage and temperature. A.L.Shustina communicated her observations on self-maintained emission from nickel-based, magnesium-oxide, cold-cathodes. The emission was excited by either visible light or electron bombardment and was accompanied by a uniform blue glow. The relation between the current and the collector potential is exponential and the maximum current density was  $7 \text{ mA/cm}^2$ . The emission current is relatively stable (3% fall over a period of 8 hours). D.V.Zernov pointed out that self-maintaining emission also occurs in films of other materials, e.g. KCl and borium anhydride. N.L.Yasnopol'skiy, N.A.Karelina and V.S.Malysheva reported on secondary emission under (primary Card 2/4

S/109/60/005/010/028/031  
E033/E415

Inter-Institutional Seminar ...

electron) irradiation of thin layers of magnesium oxide on a thin aluminium base (approximately 400 Å) with current density approximately  $10^{-6}$  A/cm<sup>2</sup>. Secondary emission coefficients  $\sigma = 7.5 - 8.5$  were obtained for primary electron energies  $V_p = 3.5 - 4.5$  kV and  $\sigma_{max} = 9$  when  $V_p = 5$  kV on MgO film formed by activation of Mg in air. Stable values were somewhat lower. In the report "Secondary Emission under (Primary Electron) Irradiation from some Dielectrics" M.M.Sheftel' communicated that the maximum values of the secondary emission coefficient  $\sigma_{max}$  were: for KCl 4.2 with  $V_p = 3$  kV; for NaCl 5.4 with  $V_p = 3.5$  to 4 kV; for MgO 8.8 to 9.8 with  $V_p = 6$  kV and current densities  $\sim 10^{-9}$  A/cm<sup>2</sup>. The base was aluminium. It was stated that a thin layer of gold between the Al and the dielectric led to an increase in  $\sigma$ . The "outflight" angular distribution of secondary electrons did not conform to a cosine law. A.Ya.Vyatskin pointed out the necessity of careful separation of "true" secondary electrons from reflected primary electrons. L.N.Dobretsov mentioned that the field of the charged spot can reduce  $\sigma$  and

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Inter-Institutional Seminar ...

S/109/60/005/010/028/031  
E033/E415

distort the angular distribution of secondary electrons. V.I.Fomina in the report "Investigation of Induced Conductivity of Some Chalcogenides of Antimony" gave results obtained on thin layers of  $Sb_2S_3$  and  $Sb_2Se_3$ . For  $Sb_2S_3$ , gain coefficients of 500 to 600 and "multiplicity" coefficients of 100 to 200 were obtained. For  $Sb_2Se_3$ , corresponding figures were 1500 to 1700 and 2 to 3. The induced current depended on the exciting current density by  $I_{in} = aI_p^n$ , where  $n$  varies from 0.5 to 1 at room temperature and above. The induced current also depends on the temperature in an exponential manner.

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CIA-RDP86-00513R001859720013-5

VIKHLYAYEVA, R.P.; ZHDAN, A.G.; SHBEL'NIKOVA, A.E.

Interagency Seminar on Cathode Electronics. Radiotekh. i elektron.  
5 no.10:1746-1748 O '60. (MIRA 13:10)  
(Cathodes) (Electron tubes)

APPROVED FOR RELEASE: 09/01/2001

CIA-RDP86-00513R001859720013-5"

VIKHLYAYEVA, Ye.M., doktor med. nauk; ZMANOVSKIY, Yu.F., kand. med. nauk

Use of tranquilizers in treating the climacteric syndrome.  
Akush. i gin. no.1:95-101 '65. (MIRA 18:10)

1. Kafedra akusherstva i ginekologii I Moskovskogo meditsinskogo  
instituta imeni Sechenova (zav.- prof. K.N. Zhmakin) i Nauchno-  
issledovatel'skiy institut akusherstva i ginekologii Ministerstva  
zdravookhraneniya SSSR (dir.- prof. O.V. Makeyeva).

VIKHLYAYEVA, Ye.M.; ZMACHOVSKIY, Yu.F.

Characteristics of the effect of sex steroid hormones on systemic motor conditioned reflexes in patients with climacteric syndrome. Akush. i gin. no.2:59-65'63. (MIRA 16:10)

1. Iz fiziologicheskoy laboratorii (zav. - prof. A.O.Dolin) Nauchno-issledovatel'skogo instituta akusherstva i ginekologii Ministerstva zdravookhraneniya RSFSR (dir. - prof. O.V. Makeyeva) i kafedry akusherstva i ginekologii I Moskovskogo ordena Lenina meditsinskogo instituta (zav. - prof. K.N. Zhmakin).  
(CLIMACTERIC) (HORMONES, SEX) (CONDITIONED RESPONSE)

VIKHLYAYEVA, Ye.M.

Principles for the treatment of patients with the climacteric syndrome. Sov. med. 27 no.6:52-58 Je '64.

(MIRA 18:1)

I. Kafedra ausherstva i inekologii (zav. - prof. K.N. Zhukin)  
I Moskovskogo ordena Lenina meditsinskogo instituta imeni I.M.  
Sechenova.

VIKNLYAYEVA, Ye.M.

Pathogenesis and treatment of the climacteric syndrome. Akush.  
i gin. no.1:3-11 '62. (MIRA 15:11)

1. Iz kafedry akusherstva i ginekologii (zav. - zasluzhennyj  
deyatel' nauki prof. K.N. Zhmakin) I Moskovskogo meditsin-  
skogo instituta imeni I.M. Sechenova.  
(CLIMACTERIC)

VIKHLYAYEVA, Ye.M.; KALMYKOVA, V.I. (Moskva)

Combined use of sex steroid hormones in the climacteric syndrome  
in patients with hypertension and arteriosclerosis. Klin.med.  
no.3:105-112 '62. (MIRA 15:3)

(HYPERTENSION) (ARTERIOSCLEROSIS)  
(CLIMACTERIC) (HORMONES, SEX)

VIKHLYAYEVA, Ye.M. (Moskva)

Thyroid gland function in women during the climacteric. Probl.  
endok.i gorm. 7 no.3:68-73 '61. (MIR 14:10)

1. Iz kafedry akusherstva i ginekologii (zav. - prof. K.N.  
Zhmakin) I Moskovskogo ordena Lenina meditsinskogo instituta  
imeni I.M. Sechenova.  
(THYROID GLAND) (CLIMATERIC)

VANINA, L.V., kand.med.nauk., VIEHLYAYEVA, Ye.M., kand.med.nauk

Tenth All-Union Congress of Obstetricians and Gynecologists  
Klin.med. 36 no.8:151-156 Ag '58  
(OBSTETRICS--CONGRESSES)  
(GYNECOLOGY--CONGRESSES)

(MIRA 11:9)

VIKHMAN, A.; SAVEL'YEV, V. (Arkhangel'sk); DEGTYAREV, N.; RYABENKOV, Ya.; BOBROVSKAYA, Z.; KULAGIN, N.; GROMADCHENKO, A. (g. Shakhty); MUN'KO, B. (g. Zaporozh'ye); STROGANOV, B. (Kaliningrad); KAZAKOV, P.; MAKAROV, L. (Dnepropetrovsk); ABRAMOVA, V. (Grodno); MOTCHENKO, T. (Kiiev); KRASNOV, A. (g. Al'met'yevsk); KAPLAN, Ya.; KASATKIN, I. (Yaroslavl').

Letters to the editors. Sov.profsoiuzy 16 no.4:44-49 F '60.  
(MIRA 13:3)

1. Chlen zavkoma, predsedatel' komissii okhrany truda moskovskogo zavoda "Elektrosvet" imeni P.N. Yablochkova (for Vikhman).
2. Glavnnyy inzhner Kuchurganskogo cherepichno-kirpichnogo zavoda, selo Sokhal'-skoye, Rozdel'nyanskogo rayona, Odesskoy oblasti (for Degtyarev).
3. Dorozhnyy komitet professional'nogo soyuza rabotnikov zhelezno-dorozhnogo transporta, Sverdlovsk (for Bobrovskaya, Kulagin).
4. Novotrubnyy zavod, g. Pervoural'sk (for Kazakov).
5. Predsedatel' postroyechnogo komiteta 5-go stroyrayona tresta "Al'met'yevneftstroy" (for Krasnov).
6. Predsedatel' ob"edinennogo postroykoma tresta "Khabarovskstroy" (for Kaplan).
7. Predsedatel' tsekhovogo komiteta otstola glavnogo tekhnologa Yaroslavskogo motornogo zavoda (for Kasatkin).

(Efficiency, Industrial) (Trade unions)

L 14462-66  
ACC NR: AP6002972

(N)

SOURCE CODE: UR/0286/65/000/024/0147/0148

INVENTOR: Sinitskiy, B. A.; Kuznetsov, V. M.; Vaksman, A. Z.; Ratner, A. G.; Vikhman, B. A.; Rimmer, A. I.; Dmitriyev, V. P.; Rikhter, A. A.; Zagaytov, A. P.

23  
B

ORG: none

TITLE: A universal form for hulls in shipbuilding<sup>ss</sup>. Class 65, No. 177291

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 24, 1965, 147-148

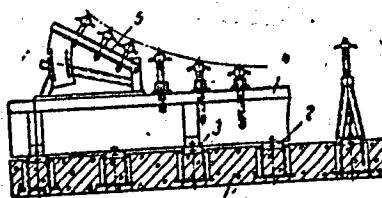
TOPIC TAGS: shipbuilding engineering, marine equipment, ship

ABSTRACT: This Author's Certificate introduces a universal form for hulls in shipbuilding. The installation includes a foundation with standard elements, e.g. beams, stands and frames in a form depending on the members which make up the hull structure. The installation is designed for convenience in assembly, efficiency in the use of production area and economy of metal. The foundation is made up of anchored longitudinal or transverse channel or angle tracks. The projecting horizontal shelves of the tracks form T-slots above the level of the foundation by the thickness of a shelf. The standard elements are made with mating sockets for fastening

UDC: 629.12.002.011 : 621.757 :  
: 621.791 : 621-783.624

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L 14462-66  
ACC NR: AP6002972



1 - foundation; 2 - tracks; 3 - horizontal shelves;  
4 - standard element; 5 - metal units.

Card 2/3

L 14462-66

ACC NR: AP6002972

to the angle or channel tracks. Detachable metal units are mounted on the standard elements.

SUB CODE: 13/ SUBM DATE: 12Nov64

G.C.  
card 3/3

GLIKMAN, L.S.; BOCHAROV, I.V.; VIKHMAN, G.L.; ABROSILOV, B.Z.; KIRILOV,  
Ye.A.; MEL'NIKOV, S.M.; AGAFONOV, A.V.; SOSKIND, D.M.

Rebuilding catalytic cracking units with a combined reactor-regenerator.  
Khim. i tekhn. topl. i masel 6 no.11:6-10 N '61. (MIRA 14:12)

1. Gosudarstvennyy nauchno-issledovatel'skiy i proyektnyy institut  
neftyanogo mashinostroyeniya.  
(Cracking process)

VIKHMAN, Goergiy L'vovich; KRUGLOV, Sergey Aleksandrovich; BASKAKOV,  
A.A., inzh., retsenzent; YEFREMOVA, T.D., ved. red.;  
VOROB'YEVA, L.V., tekhn. red.

[Principles of the design of equipment and machines for  
petroleum refineries] Osnovy konstruirovaniia apparatov i  
mashin neftopererabatyvaiushchikh zavodov. Moskva, Gos.  
nauchno-tekhn. izd-vo neft. i gorno-toplivnoi lit-ry, 1962.  
(MIRA 15:2)  
110 p.  
(Petroleum refineries—Equipment and supplies)

VIKHMAN, L.A.

Effect of some drugs on hemagglutination with the influenza virus.  
Zhur. mikrobiol. epid. i immun. 31 no. 5:118 My '60.  
(MIRA 13:10)  
(BLOOD—AGGLUTINATION) (INFLUENZA)

VIKMAN, M.Ye.

High-pressure pneumatic membrane gauge (pressure-drop gauge).  
Khim.i tekhn.topl.i masel 5 no.12:56-58 D '60. (MIRA 13:12)

1. Spetsial'noye konstruktorskoye byuro po avtomatike v nefteperera-  
botke i proizvodstve iskusstvennogo zhidkogo topliva.  
(Pressure gauges)

~~VIKHM, N.A.~~

Arsenic content in the teeth in health, in caries and in alveolar pyorrhea. Stomatologija 42 no.3:23-25 My-Je'63 (MIRA 17:1)

1. Iz kafedry terapevticheskoy stomatologii (zav. - prof. Ye.Ye. Platonov) i kafedry obshchey khimii (zav. - dotsent A.A. Zats) Moskovskogo meditsinskogo stimatologicheskogo instituta.

BERKLEYD, I.M.; VIKHMAN, V.S., doktor tekhn. nauk; DRAUDIN, A.T.; KOPANEVICH, N.Ye.; OVCHARENKO, G.I.; TUBENSHLYAK, Z.L.; CHASOVNIKOV, G.V.; TSEYTLIN, Ya.M.; BAYEIROV, B.S., red.; KOCHENOV, M.I., red.; MALYY, D.D., red.; STROGANOV, L.P., inzh., red. izd-va; DOBRITSYNA, R.I., tekhn. red.

[Automatic controllers] Kontrol'nye avtomaty. Moskva, Mashino-tekhnik. izd-vo mashinostroit. lit-ry, 1961. 193 p. (MIRA 14:8)  
(Electronic measurements)

Vikhman

AUTHOR: Levenson, Ye.H., Engineer

SOV-117-58-9-22/22

TITLE: Review (Retsenziya)

PERIODICAL: Mashinostroitel', 1958, Nr 9, p 48 (USSR)

ABSTRACT: This is a critical review of a book by V.S. Vikhman published in 1957, entitled "Electro-Automation of Technical Control of Machine-Building Production".

1. Machine tools--Production    2. Machine tools--USSR

Card 1/1

USCOMM-DC-55523

VIKHMAN, V. S. (Cand. Tech. Sci.) and D'YACHENKO, I. Ye. (Dr. Tech. Sci., PROF.);

XXI. "Automation and Mechanization of Technical Inspection Under Instrument-manufacturing Conditions," Automation and Mechanization of Production Processes in Instrument Manufacturing, Moscow, Mashgiz, 1958. 591 p.

PURPOSE: This book is intended for engineers, technicians, and scientific personnel concerned with mechanization and automation of production processes in instrument manufacturing, and for students and teachers of this subject in vuzes.

*VIKHMAN, V.S.*

PLATE I BOOK EXPLANATION 25/478

Symposium organized by supervisory ministries of machine-building, machine-tools, machine and instrument industries and funds for development) Moscow, 1980. 463 p. 5,000 copies printed.

M.I. Aksentyev, N.N. Bagayev, Gavrilov, Doctor of Technical Sciences, Professor; N.N. Bagayev, M.A. Blagoveshchenskaya, Doctor of Technical Sciences, Professor; N.N. Bagayev, M.V. Poborovsky, Engineer; Ed. of Publishing House "Fiz. Kochetov, Engineer; Book Eds. V.I. Klimid and A.M. Tishchenko.

PURPOSE. This book is intended for technical and scientific personnel in the machine and instrument industries and for students and teachers of methods of design and production.

CONTENTS. The book deals with current theory and practice in the manufacturing processes of the machine and instrument industries and includes discussions on problems for development. The physical nature of the processes and their technical-economic features and possibilities are considered. Particular attention is given to new and progressive processes (explosive, magnetic, electric, ultrasonic, cold, pressureless, friction, casting, precision grinding, new methods of welding, etc.). The book consists of papers presented at the All-Union Card 7/1

Scientific-Technical Conference on "Advanced Machine and Instrument Manufacturing Processes," held in 1978. The papers have been revised in the light of recent developments in the field. A chapter is devoted to the automation and mechanization of the industry. Series and non-series references appear at the end of the chapters.

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Present State (Cont.)

SOV/4718

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3. Automation of checking operations	475
4. Automation and mechanization of labor-consuming operations	484
5. Modern machine-tool building	491
6. Generalization of advanced experience	500
7. Conclusions, outlook, and problems in the field of full automation and mechanization of production	500
	502

Ch. XIX. Method of Determining the Economic Effectiveness of Full Mechanization and Automation in Machine Building [K.I. Klimenko, Doctor of Economic Sciences, Professor]

506

Card 10/11

VIKHMAN, V.S.

Using television calculating equipment in automatic dimension control. Izm.tekh. no.11:3-14 N '62. (MIRA 15:11)  
(Industrial television) (Electronic control)

PHASE I BOOK EXPLOITATION SOV/5839

Berklayd, I. M., V. S. Vikhman, A. T. Draudin, N. Ye. Kopanevich,  
G. I. Ovcharenko, Z. L. Tubenshlyak, G. V. Chasovnikov and Ya. M. Tseytlin

Kontrol' nyye avtomaty (Dimensional-] Control Automatics) Moscow, Mashgiz,  
1961. 193 p. (Series: Progressivnyye sredstva kontrolya razmerov v mashino-  
stroyenii) Errata slip inserted. 4500 copies printed.

Eds. of Series: B. S. Bayburov, M. I. Kochenov, and D. D. Malyy; Scientific  
Ed.: V. S. Vikhman, Doctor of Technical Sciences; Ed. of Publishing House:  
L. P. Stroganov, Engineer; Tech. Ed.: R. I. Dobritsyna; Managing Ed. for  
Literature on Means of Automation and Instrument Construction: N. V. Pokrov-  
skiy, Engineer.

PURPOSE: This book is intended for designers and technical personnel in machine  
plants.

Card 1/1  
✓

Control Automatics

SOV/5839

**COVERAGE:** The book contains information on the most important Soviet late-model automatics for the inspection, sorting, and automatic control of machine parts according to their geometric parameters. The book is part of a series devoted to modern means of dimensional control and was recommended by the Commission on the Introduction of Advanced Control Methods and Means in the Machine Industry of the State Scientific-Technological Committee of the Council of Ministers of the USSR. Attention is given to the construction, operation, and specifications of a number of dimensional-control automatics for various purposes. Photographs and layout diagrams are included. No personalities are mentioned. There are no references.

**TABLE OF CONTENTS:**

Introduction	5
Ch. I. General-Purpose [Dimensional-] Control Automatics	10
Card 2 / 3	

POKROVSKIY, G.P.; VIKHMAN, V.S., doktor tekhn. nauk, retsenzent;  
YEGORKINA, L.I., inzh., red.

[Use of electronic control in automobile engine fuel  
systems] Primenenie elektroniki v sistemakh pitanija  
avtomobil'nykh dvigatelей. Moskva, Izd-vo "Mashinostro-  
enie, 1964. 98 p. (MIRA 17:5)

VIKHMANN, V.S.

25(1,6) PAGE 1 BOOK EXPLORATION 207/1592

Akademiya Nauk SSSR. Institut mashinostroyeniya

Osnovnye voprosy tekhnicheskoi vairosamernosti i takhnicheskikh  
svoistv mashinostroyeniia (Basic Problems of Accuracy, Internal  
Changeability and Engineering Measurements in Machine Building)  
Moscow, Naukova Dumka, 1973. 111 p. 4,500 copies printed.

26. A.M. Gavrillor, Doctor of Technical Sciences, Professor;  
Tech. Ed.; B.I. Model, Candidate of Technical Sciences, Professor;  
Working and Tool Making (Metallj), A.D. Sogolman, Ing. Mech.  
PURPOSE: This collection of articles is intended for engineers,  
and scientific workers and for teachers and students of machine  
and instrument building viruses.

COVERAGE: This collection of article presents the works of a conference on basic problems of accuracy, interchangeability and  
engineering measurements, convened in March 1976 by the Machine  
Building Technology Commission of USSR Akademii Nauk (Institute of  
Machine Construction of the Academy of Sciences, [INM], the  
State Committee for Modern Technology, the Committee for  
Standard Designs and Manufacturing Instruments under the Council  
of Ministers USSR, the Ministry for Machine Building and the  
Ministry of Higher Education of the USSR. In the articles  
dealing with accuracy of fabrication, problems of the theory and  
practice of calculating accuracy of standard processes and  
changeability products are discussed. In the articles on inter-  
changeability and engineering measurements an evaluation of the  
present state of this field is presented along with the  
scientific and engineering outlook for the future. Theoretical  
and practical problems of automatic inspection are discussed.  
No theoretical conclusions are reached. There are 110 references of  
which 121 are Russian, 10 German, 6 English, 1 French.

## TABLE OF CONTENTS:

Basic Problems of Accuracy (Cont.)  
✓ Vizhman, V.S.; Candidate of Technical Sciences. On the  
problem of Selecting Methods for Transforming Measuring  
Pulses for Automation of Inspection Processes 374

✓ Kondakovskiy, V.V., Candidate of Technical Sciences;  
Present, Present State and Prospective Problems of  
Developing and Introducing Feedback Control Methods 394

AVAILABILITY: Library of Congress

207/1592  
Card 8/8  
6-12-59

VIKHMAN, V. S.

"An automatic compensation of the wear of cutting tool."

Programmed Control of Metal Cutting Machines. report presented at  
All-Union Conference, Moscow, 13-16 Nov 1957  
Vestnik Ak. Nauk SSSR, 1958, No. 2, pp. 113-115, (author Kobrinskiy, A. Ye.)

GAVRILOV, A.N., prof., doktor tekhn.nauk; DEM'YANYUK, F.S., prof., doktor tekhn.nauk; MITROFANOV, S.P., kand.tekhn.nauk; KORSAKOV, V.S., prof., doktor tekhn.nauk; IVANOV, D.P., doktor tekhn.nauk; STO-ROZhev, M.V., kand.tekhn.nauk; MALOV, A.N., kand.tekhn.nauk; KUDRYAVTSEV, I.V., prof., doktor tekhn.nauk; SHMEYDER, Yu.G., kand.tekhn.nauk; SHUKHOV, Yu.V., dotsent; KAZAKOV, N.P., kand.tekhn.nauk; ZOLOTIKH, B.N., kand.tekhn.nauk; ROZENBERG, L.D., prof., doktor tekhn.nauk; YAKHIMOVICH, D.Ye., inzh.; NIKOLAYEV, G.A., prof., doktor tekhn.nauk; VLADZIYEVSKIY, A.P., doktor tekhn. nauk; SHAUMIAN, G.A., prof., doktor tekhn.nauk; KOSHKIN, L.N., kand.tekhn.nauk; BOBROV, V.P., kand.tekhn.nauk; NOVIKOV, M.P., kand.tekhn.nauk; VIKHMAN, V.S., kand.tekhn.nauk; DERBISHER, A.V., kand.tekhn.nauk; KLIMENTKO, K.I., prof., doktor ekonom.nauk; VIATKIN, A.Ye., inzh.; SATEL', E.A., prof., doktor tekhn.nauk; POPOV, I.G., inzh.; MATVYENKO, V.V., inzh.; KOCHETOVA, G.F., inzh., red.izd-va; EL'KIND, V.D., tekhn.red.; TIKHANOV, A.Ya., tekhn.red.

[Present status and trends of future development of technological processes in the manufacture of machinery and instruments] Sovremennoe sostoyanie i napravleniya razvitiia tekhnologii mashino-stroeniia i priborostrroeniia. Moskva, Gos.nauchno-tekhn.izd-vo mashinostroit.lit-ry, 1960. 563 p. (MIRA 13:7)

(Machinery industry--Technological innovations)  
(Instrument manufacture--Technological innovations) (Automation)

BALAKSHIN, O.B.; VIKHMAN, V.S., doktor tekhn. nauk, retsenzent;  
KURATTSEV, L.Ye., inzh., red.

[Automation of pneumatic control of dimensions in the  
manufacture of machinery] Avtomatizatsiya pnevmaticheskogo  
kontrolia razmerov v mashinostroenii. Moskva, Mashino-  
stroenie, 1964. 363 p. (MIRA 17:10)

L 24870-66 EWT(d)/EWP(v)/EWP(k)/EWP(h)/EWP(i)

ACC NR: AP6006373

SOURCE CODE: UR/0413/66/000/002/0107/0107

AUTHORS: Kuznetsov, V. S.; Vikhman, V. S.; Leont'yev, K. L.; Zharov, N. A.; Rez, I. S.

46

B

ORG: none

TITLE: An automatic pyrometer of the spectral ratio. Class 42, No. 178146

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 2, 1966, 107

TOPIC TAGS: automatic control technology, pyrometer, spectrum analyzer, precision instrument machinery

ABSTRACT: This Author Certificate presents an automatic spectral ratio pyrometer.  
The pyrometer contains a radiation receiver, an amplifier, an output signal  
commutator, and an indicator or a slave mechanism. The design shortens the  
pyrometer response time, increases the instrumental precision, and simplifies the  
scaling circuit of the pyrometer. The unit has an electro-optical system in the  
form of a rapid response dispersion light filter with an electro-optical crystal  
(see Fig. 1). This crystal is switched by an electronic commutator. The output of  
the circuit controlling the sensitivity of the radiation receiver (to normalize the

Card 1/2

UDC: 536.521:621.383

L 24870-66

ACC NR: AP6006373

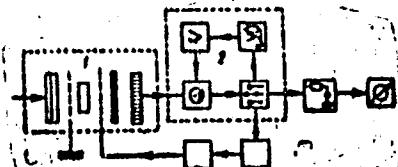


Fig. 1. 1 - rapid response controlled electro-optical light filter; 2 - circuit for controlling the sensitivity of the radiation receiver.

output signal) is connected to one of the outputs of the electronic commutator. The output of the sensitivity control circuit is connected to the outputs of the radiation receiver. Orig. art. has: 1 figure.

SUB CODE: 30,07,14/SUBM DATE: 06Jun64

Card 2/2 dda

ABAKUMOVSKIY, D.D., inzh.; VIKIMAN, Yu.L., inzh.; VOLDOVOZOV,A.I.,inzh.; ZORIN,R.P.,inzh.; IGNATCHENKO,Ye.A.,inzh.; LITINSKIY,M.E.,inzh.; SAZONOV,A.I.,inzh.; PRITULA,V.A., inzh.,; POMAZKOV,S.A.,inzh.; FRUKHTZEYN,L.I.,inzh.; SAFOZHENIKOV,N.M.,inzh.; HASYUK, A.I., inzh.; YANKELEV,L.F.,inzh.; BASHILOV,M.M.,otv. red.; LATINSKIY,M.E., red.; POLOSINA, A.S., tekhn. red.

[Handbook for builders and assemblers of the petroleum industry]  
Spravochnik stroitelia-montazhnika neftianoi promyshlennosti. Mo-  
skva, Gostoptekhizdat, 1946. 250 p. (MIR: 15:4)

1. Russia(1923- U.S.S.R.) Narodnyy komissariat neftyanoy promysh-  
lennosti. Glavnoye upravleniye. 2. Narodnyy komissariat neftyanoy  
promyshlennosti SSSR (for all except Bashilov, Latinskiy, Polosina).  
(Petroleum industry)

"APPROVED FOR RELEASE: 09/01/2001

CIA-RDP86-00513R001859720013-5

VIKICMAN, Z.A., Iran.; FISHBER, F.K., Irinh.

Conveyor with an automatic addressing system used in a machine shop. Mekh. i avtom. proizv. 18 no.4:31-34 Ap'64. (MIRA 17:5)

APPROVED FOR RELEASE: 09/01/2001

CIA-RDP86-00513R001859720013-5"

VIKEMANN, F. [Vichmann, F.]

Generalized convergence factors for Euler-Knopp's method. Resti  
tead akad tehn fuus 11 no.2:107-113 '62.

1. Tartuskiy gosudarstvennyy universitet.

BABITSKIY, Il'ya Filippovich; VIKHMAN, Georgiy I'vovlich;  
VOL'FSOV, Samuil Iosifovich; KORSUN, Ye.P., ved. red.

[Designing and constructing the apparatus of petroleum  
refineries] Raschet i konstruirovaniye apparatury nefte-  
pererabatyvaiushchikh zavodov. 2. perer. i dop. izd.  
Moskva, Nedra, 1965. 903 p. (MIRA 18:2)

L 12808-66 EWT(1)/EWA(j)/T/EWA(b)-2 JK

ACC NR: AP5028188

SOURCE CODE: UR/0248/65/000/008/0074/0082

AUTHOR: Prozorovskiy, S. V.; Vikhnovich, E. M.; Vinnikova, N. I.; Zubets, N. A.

ORG: Institute of Epidemiology and Microbiology im. N. F. Gamalei, AMN SSSR (Institut epidemiologii i mikrobiologii AMN SSSR); Institute of Virology im. D. I. Ivanovskiy, AMN SSSR, Moscow (Institut virusologii AMN SSSR)

TITLE: Biology of L-forms of bacteria and mycoplasms, causative agents of diseases of the respiratory organs and upper respiratory tract

SOURCE: AMN SSSR. Vestnik, no. 8, 1965, 74-82

TOPIC TAGS: bacteria, mycoplasm, infective disease, microbiology

ABSTRACT: Study of various representatives of Mycoplasmataceae - *M. gallinarum*, *M. gallisepticum*, *M. inners*, *Murimices pulmonis*, *Musculomices pulmonis*, *M. hyoileinis*, *M. mycoides*, *M. pneumoniae*, *M. salivarium*, and *M. orale* - showed them to be pneumotropic, aerobic (except *M. salivarium* and *M. orale*), similar in enzymatic activity, in need of horse or rabbit serum in the medium to ensure growth, and capable of causing α- or β-hemolysis of equine erythrocytes. These agents are serologically

Card 1/2

UDC: 576.8.095.5.06 : 616.2

L 12808-66

ACC NR: AP5028188

specific. A comparison of *M. pneumoniae* and other mycoplasmas revealed that the morphology and microstructure of *M. pneumoniae* colonies are typical of most mycoplasmas. In view of the close relationship between mycoplasmas and bacterial forms and the reversion of some strains of mycoplasmas into bacteria, the authors conclude that some species of mycoplasmas can be regarded as L-form bacteria. They suggest that in the light of this phenomenon research should be directed to elucidation of the possible role of L-form bacteria and mycoplasmas in the pathogenesis of some acute and chronic diseases of the respiratory organs and upper respiratory tract.

Orig. art. has: 5 figures, 2 tables.

SUB CODE: 06/ SUBM DATE: 02Jun65/ ORIG REF: 024/ OTH REF: 000

jw  
Card 2/2

KAGAN, G.Ya.; DREYZIN, R.S.; PROZOROVSKIY, S.V.; VIKHNOVICH, E.M.

Cultivation of Eaton's agent (*Mycoplasma pneumoniae*) on  
artificial culture media. Biul. eksp. biol. i med. 60  
no.9:75-78 S '65. (MIRA 18:10)

1. Otdel obshchey meditsinskoy mikrobiologii (zav. - deyst-  
vitel'nyy chlen AMN SSSR prof. V.D. Timakov) Instituta epi-  
demiologii i mikrobiologii imeni Gamalei (dir. - chlen-  
korrespondent AMN SSSR prof. P.A. Vershilova) AMN SSSR i  
Institut virusologii imeni Ivanovskogo (dir. - deystvitevnyy  
chlen AMN SSSR prof. V.M. Zhdanov), Moskva.

VIKHNOVICH, O.L., inzh.

Vibration drawing of ore. Bezop. truda v prom. 8 no.10:25-26 0 '64.  
(MIRA 17:11)

1. Institut gornogo dela im. A.E. Skochinskogo.

VIKHNOVICH, O.L. (Moskva); GONCHAREVICH, I.F. (Moskva); TERPAGOSOV, Z.A.  
(Moskva)

Study of the operational productivity and labor consumption  
of vibration drawing and delivery of ore. Izv. AN SSSR. Met.  
i gor. delo no.6:179 N-D '64. (MIRA 18:3)

"APPROVED FOR RELEASE: 09/01/2001

CIA-RDP86-00513R001859720013-5

MARKOV, Georgi; TOSHKOV, Marin; VIKHODTSEVSKI, Nikolai

Protection of nature in Bulgaria. Priroda Bulg 13 no.3:3-9  
My-Je '64.

APPROVED FOR RELEASE: 09/01/2001

CIA-RDP86-00513R001859720013-5"

VIKHODSESKII, N.

"Contribution to the study of the biology of the sea dragon, Trachinus draco L."

p. 585 (Izvestia) Vol. 7, no. 7, 1956. Sofia, Bulgaria

SO:: Monthly Index of East European Accessions (EEAI) LC, Vol. 7, no. 5., May 1958

VIKHOREV, B.A.; MININ, A.Ye.

Modernization of atomizers and batchers for electric painting.  
Der. prom. 13 no.9:24-25 S '64. (MIRA 17:11)  
1. Leningradskaya fabrika muzykal'nykh instrumentov im. Lunacharskogo.

MININ, A.Ye.; VIKHOREV, B.A.

Some characteristics of the electric painting of wood. Der. prom.  
(MIRA 18:5)  
14 no.4:15 Ap '65.

MININ, A.Ye.; VIKHOREV, B.V.

Fire prevention measures at installations for wood finishing.

Der. prom. 14 no.1:24-25 Ja '65.

(MIRA 18:4)

MIMIN, Andrey Yefimovich; VIKHOREV, Boris Andreyevich;  
KOTLYAREVSKAYA, G.S., red.

[Operation of units for electrostatic spray painting]  
Ekspluatatsiia elektrookrasochnykh ustavovok. Lenin-  
(MIRA 18:7)  
grad, 1965. 26 p.

VIKHOREV, G., inzh.

Optimum velocity of air in air coolers. Khol. tekhn. 35 no. 3:48  
(MIRA 11:7)  
My-Je '58.

1. Odesskiy tekhnologicheskiy institut pishchevoy i kholodil'noy  
promyshlennosti.  
(Refrigeration and refrigerating machinery)

VIKHOREV, G.

Calculations for a heat pump used for heating [with summary in English]. Khol.tekh. 37 no.2:22-24 My-Ap'60. (MIRA 13:10)

1. Odesskiy tekhnologicheskiy institut pishchevoy i kholodil'noy promyshlennosti.  
(Heat pumps)

VIKHOREV, G.A., kand. tekhn. nauk. [deceased]

Selecting the optimum current density for thermoelectric refrigeration systems on the basis of a technical and economic analysis. Khol. tekhn. i tekhn. no.1:19-23 '65. (MIRA 18:9)

VIKHOREV, G.A., kand. tekhn. nauk; SEMENYUK, V.A., inzh.

Effect of the thermal e.m.f. on the characteristics of semiconductor batteries fed by their rectifiers. Khol. tekhn. i tekhn.  
(MIRA 18:9)  
no.1:24-28 '65.

BONDARENKO, K. F., inzh.; VIKHOREV, G.A., inzh.

Determining the height of coil spiral fins on the basis of  
the condition of the volume of metals. Trudy OTIPiKhP 12:  
117-120 '62.

1. Kafedra kholodil'nykh ustyanovok i kafedra kholodil'nykh  
mashin Odesskogo tekhnologicheskogo instituta pishchevoy  
i kholodil'noy promyshlennosti.

MEL'TSER, L.Z., kand.tekhn.nauk; VIKHOREV, G.A., inzh.; KOMISSARENKO,  
V.A., inzh.; SPINIVASAN, R.V.

Experimental study of a two-stage compressor with a 1 : 1  
ratio of the stage volumes. Khol.tekh. 40 no.5:23-27 S-0  
'63. (MIRA 16:11)

1. Odesskiy tekhnologicheskiy institut pishchevoy i kholodil'-  
noy promyshlennosti.

VIKHOREV, K.A., inzh.; KURBATOV, N.M., inzh.

Supplying preassembled diesel engines from machine manufacturing  
plants and installing them in ships. Sudostroenie 24 no.7:50-53  
J1 '58. (MIRA 11:9)

(Marine diesel engines)

AMROM, S.D., LEBEDEV, O.T.; VIKHOREVA, K.N.

Device for studying the higher nervous activity in man by the  
method of conditioned level. Zhur. vys. nerv. deiat. 15 no.3:  
567-572 My-Je '65.  
(MIRA 18:6)

I. Institut evolyutsionnoy fiziologii i biokhimii im. I.M.  
Sechenova AN SSSR.

VIKHOREV, V.A.; ALEYNIKOVA, F.A.

Activity of the Printing Industry Section of the Technical and  
Economic Committee of the Leningrad Economic Council. Biul.-  
tekh.-ekon.inform. no.2:85-86 '62. (MIRA 15:3)  
(Leningrad--Printing industry)

ACC NR: AP6015682

(N)

SOURCE CODE: UR/0413/66/000/009/0079/0079

INVENTOR: Vikhorev, V. G.; Deniskin, V. P.; Trakhtenberg, L. I.

ORG: None

TITLE: An eddy current instrument for measuring the thickness and resistivity of sheet material. Class 42, No. 181306

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 9, 1966, 79

TOPIC TAGS: eddy current, electronic measurement, resistivity

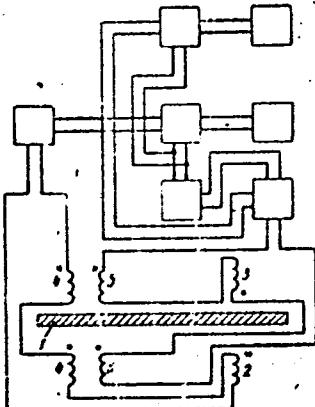
ABSTRACT: This Author's Certificate introduces an eddy current instrument for measuring the thickness and resistivity of sheet material. The unit contains an rf current generator, two overlapping eddy current pickups, phase detectors which are sensitive to changes in the thickness and resistivity of the sheet material and an indicator. The unit is designed for eliminating the effect which changes in the gap between the pickups and the sheet being inspected have on instrument readings. The device contains a shielded pickup with current and measurement coils with the same geometric specifications as the corresponding coils in the overlapping pickups, while the measurement coil in the shielded pickup has three times as many turns as that in the overlapping pickup. The current coils in all pickups are connected in series and are all in phase. The measurement coils in the overlapping pickups are likewise connected.

Card 1/2

UDC: 531.717.11.621.317.33

ACC NR: AP6015682

in series and in phase with each other and in series and opposition with the measurement coil of the shielded pickup.



1--sheet being inspected; 2--current coil of the shielded pickup; 3--measurement coil of the shielded pickup; 4--current coils of the overlapping pickups; 5--measurement coils of the overlapping pickups

SUB CODE: 09/ SUBM DATE: 12Ju165

Card 2/2

LEBEDEV, O.T.; VIKHOREVA, K.N.

Device for synchronizing stimulators and controlling and measuring  
instruments. Fiziol.znur. 51 no.7:895-896 '65. (MIRA 18:10)

1. Institut evolutsionnoy fiziologii imeni I.M.Sachenova AN SSSR,  
Leningrad.

L 27646-66

ACC NR: AP6018518

SOURCE CODE: UR/0239/65/051/007/0895/0896  
30  
B

AUTHOR: Lebedev, O. T; Vikhoreva, K. N.

ORG: Institute of Evolutionary Physiology, im. I. M. Sechenov, Leningrad, AN SSSR  
(Institut evolyutsionnoy fiziologii AN SSSR)

TITLE: Instrument for synchronous switching on of a stimulant and of control and measuring devices

SOURCE: Fiziologicheskiy zhurnal SSSR, v. 51, no. 7, 1965, 895-896

TOPIC TAGS: electronic circuit, conditioned reflex, electric relay, electronic equipment

ABSTRACT: An electronic circuit has been designed by means of which the stimulant and a number of control and measuring devices are switched on simultaneously in experiments in which the dynamic characteristics of analysors (visual, auditory, etc.) are studied. Application of the circuit proposed eliminates the shortcomings connected with the use of electro-mechanical relays. The arrangement in question is suitable for the study of conditioned reflexes. Orig. art. has 1 figure. [JPRS]

SUB CODE: 06,09/ SUBM DATE: 18Feb64/ ORIG REF: 001/ OTH REF: 001

UDC: 612.84.08

Card 1/1 ('C)

L 23162-66  
ACC NR: AP5015947

SOURCE CODE: UR/0247/65/015/003/0567/0572

AUTHOR: Amrom, S. D.; Lebedev, O. T.; Vikhoreva, K. N.

J. J.  
B

ORG: Institute of Evolutionary Physiology and Biochemistry imeni I. M. Sechenova, Academy of Sciences, SSSR (Institut evolyutsionnoy fiziologii i biokhimii Akademii nauk SSSR)

TITLE: Device for the investigation of higher nervous activity in man by the conditioned level method

SOURCE: Zhurnal vysshey nervnoy deyatel'nosti, v. 15, no. 3, 1965, 567-572

TOPIC TAGS: nervous system, reflex activity, conditioned reflex; medical equipment

ABSTRACT: The conditioned level method proposed for studying higher nervous activity consists of having the subject press a button up to an assigned point on the scale of a reflexometer; his sense of sight, hearing or touch may be used. The subject is then required to repeat the same action "blindly". A special apparatus was constructed for the study of this method. When the apparatus is turned on the first timer measures the time of latent stimulation. Simultaneously, a stimulus

UDC: 612.833.81 + 612.821.1

Z

Card 1/2

L 23162-66  
ACC NR: AP5015947

(sound, light, etc.) is generated. As soon as the subject presses the button on his control board the first timer is stopped and the second is activated. When the stimulus is stopped by the subject, a starting impulse is produced which stops the second timer and switches on the third. This timing device, measuring the time of latent retardation, continues to count the time until the operation stops. If the "blind" action of the subject fails to reach the given level, the third device is not switched on and the second timer operates until the operation stops. There are four stimulators in the apparatus which may emit stimuli at (1) the beginning of the latent stimulation, (2) the end of the latent stimulation, (3) the end of the reaction, i. e., at the beginning of latent retardation, (4) the end of latent stimulation. The order of stimuli may be varied, for example, to 1-4, 2-3, 3-4, etc. The exact deviation from the conditioned level of the "blind" action of the subject is measured by the deflection of rays on the screen of an oscillograph. Block diagrams of the test apparatus are presented. Orig. art. has: 4 figures.

SUB CODE: 06/ SUBM DATE: 23Mar64/ ORIG REF: 006/ OTH REF: 000

Card 2/2 ULR

SHISHOKIN, V.P.; AGNIEVA, V.A.; VIKHOREVA, N.A.

Determination of a rapid hardness index as method of physicochemical analyses. Trudy LPI no.202:56-64 '59. (MIRA 12:12)  
(Metals--Testing) (Hardness)

SHISHOKIN, V.P.; VIKHOREVA, N.A.

Concentrated method of determining durable hardness. Trudy LPI  
no.202:65-67 '59. (MIRA 12:12)  
(Metals--Testing) (Hardness)

18(7), 18(6)

SCV/160-50-131/50

AUTHORS: Shishokin, V. P., Vikhoreva, N. A.

TITLE: Concentric Method of Long-term Hardness Determination  
as a Method of Physicochemical Analysis (Kontsentratsionnyy  
spasob opredeleniya dlitel'noy tverdosti kak metod fiziko-  
khimicheskogo analiza)

PERIODICAL: Nauchnyye doklady vysshey shkoly. Metallurgiya, 1959,  
Nr 1, pp 165 - 167 (USSR)

ABSTRACT: In this investigation the long-term hardness was determined  
by impressing a cone successively into the same indenta-  
tion, which thus can be described as a method of concentric  
indentations. The opening angle of the cone was 90°. Lead,  
tin, cadmium, and bismuth, and the eutectic alloys and  
solid solutions formed by these metals were investigated.  
In all cases a rectilinear relationship was found to exist  
between the logarithm of the indentation diameter and the  
logarithm of the load time. Eutectic alloys exhibited the  
greatest reduction of hardness with increasing duration

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207/100-50-1-51/5c

of load time. Variations of the load between 16.4 - 62 kg exert no influence upon the ratio hardness-load time. The relationship between the indentation diameter d and the load time  $\tau$  is expressed by the formula  $d = a\tau^n$ , where a and n are constants depending upon the composition and the structure of the alloy. As, however, between the Brinell hardness  $H_B$  and the indentation diameter d there exists the relationship  $H_B = a_1 d^{-2.04}$  (Ref 2), the yields  $H_B = a_2 \tau^{n'}$ , where  $n' = 2.04 n$ , n can be determined according to a formula given in this paper.  $n'$  is the index of the hardness variation rate and is a measure of long-term hardness. A parallel course is found between the variation of  $n'$  and the thermal coefficient of the hardness (Ref 6). A reduction of the deformation rate exerts the same influence upon the mechanical properties as a rise in temperature. The factors which are the cause of the varying magnitude of  $n'$  must also influence the thermal coefficient of hardness. The principal factor influencing the modification of hardness is the

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SCV/163-59-1-31/50

displacement of the equilibrium in the following reversible process: consolidation  $\rightleftharpoons$  stress relief (Ref 7). In eutectic alloys this displacement may be connected with the solution and precipitation processes taking place at the contact surfaces between the phases (Ref 8). In solid solutions the displacement of equilibrium due to a change of temperature and of the rate of deformation can be determined by variations of the volume and of the polarization conditions (Ref 9). There are 1 figure, 1 table, and 9 references, 7 of which are Soviet.

ASSOCIATION: Leningradskiy politekhnicheskiy institut (Leningrad Polytechnical Institute)

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*Vikhrev, Ivan Dmitriyevich*

Call Nr: TN 677.V5

AUTHOR: Vikhrev, Ivan Dmitriyevich, Candidate of Technical Sciences

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